



PERMIT GVA0003

Pursuant to:

Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008
and the BC Environmental Management Act, S.B.C 2003, c.53

Issued to:

Richmond Steel Recycling Ltd
(the "Permittee")

To Authorize:

the discharge of air contaminants to the air from
Metal Recycling Plant

Located at:

11760 Mitchell Road, Richmond, BC V6V 1V8

Effective Period:

The terms and conditions set out in the Permit apply to the existing or planned works as of
December 20, 2023 and this Permit will expire on December 15, 2033.

All previous versions of this Permit are invalid.

Issued: November 30, 1992
Amended: December 20, 2023


Kathy Preston, Ph.D., P.Eng.
District Director

SECTION 1 – AUTHORIZED EMISSION SOURCES

Authorization to discharge air contaminants from the authorized Emission Sources and Works listed below is subject to the specified terms and conditions.

Approximate locations of the emission sources are shown on the Site Plan in section 4.

EMISSION SOURCE 01: Full Box Shredder with Cooling-Water and Foaming Agent Injection System discharging through a Building Opening(s).

MAXIMUM EMISSION FLOW RATE: The rate of discharge is that resulting from the operation of the shredder utilizing the Autopilot feed process and Smart Water Injection System (WIS).

MAXIMUM ANNUAL OPERATING HOURS: 8760 h/y

MAXIMUM EMISSION QUANTITY:

1. 9.9 t/y Total Volatile Organic Compounds
2. 3.2 t/y Particulate Matter

MAXIMUM EMISSION QUALITY:

1. 20% Opacity

WORKS AND PROCEDURES:

The equipment is a full box shredder with a computer-operated, automated feed process, shredder mill box, and related appurtenances. The equipment must be operated with the cooling-water and foaming agent injection system on in order to minimize the formation of "blue smoke" (VOC) and particulate matter emissions. The cooling-water and foaming agent injection system must be operated at a rate that achieves a minimum 5% moisture content for the shredded material. While the equipment is in use, good operating practices must be employed and it must be operated in accordance with an approved Fugitive Dust and Volatile Organic Compound Mitigation Action Plan.

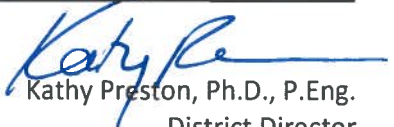
The Daily Maximum Emission Quantity for Particulate Matter is 19.0 kg/day and for Volatile Organic Compounds is 59.4 kg/day.

EMISSION SOURCE 03: Shredder Line Conveyor Drop Points discharging through a Transfer Point(s).

MAXIMUM EMISSION FLOW RATE: The rate of discharge is that resulting from the transfer of shredded material and wind erosion effects.

MAXIMUM ANNUAL OPERATING HOURS: 8760 h/y

Issued: November 30, 1992
Amended: December 20, 2023


Kathy Preston, Ph.D., P.Eng.
District Director

Permit GVA0003

METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

MAXIMUM EMISSION QUANTITY:

1. 0.12 t/y Particulate Matter

MAXIMUM EMISSION QUALITY:

1. 20% Opacity

WORKS AND PROCEDURES:

Good operating practices must be employed while the 9 Covered conveyors are in use. The equipment must be operated in accordance with an approved Fugitive Dust and Volatile Organic Compound Mitigation Action Plan.

The Daily Maximum Emission Quantity for Particulate Matter is 0.75 kg/day.

EMISSION SOURCE 04: De-polluting Station and 6 Above-ground Storage Tanks discharging through a Vent(s).

MAXIMUM EMISSION FLOW RATE: **The rate of discharge is that resulting from the transfer of fluids and storage tank venting.**

MAXIMUM ANNUAL OPERATING HOURS: **8760 h/y**

MAXIMUM EMISSION QUANTITY:

1. 0.14 t/y Fugitive Volatile Organic Compounds

WORKS AND PROCEDURES:

The de-polluting station is the area used to drain vehicles of fluids and the six above-ground vented storage tanks contain organic liquids. While the equipment is in use, good operating practices must be employed and it must be operated in accordance with an approved Fugitive Dust and Volatile Organic Compound Mitigation Action Plan.

The Daily Maximum Emission Quantity for Volatile Organic Compounds is 0.4 kg/day.

EMISSION SOURCE 05: Dust from Torch and Hydraulic Shear Cutting Area and Truck Loading activities.

MAXIMUM EMISSION FLOW RATE: **The rate of discharge is that resulting from torch cutting metal material and truck loading.**

MAXIMUM ANNUAL OPERATING HOURS: **8760 h/y**

MAXIMUM EMISSION QUANTITY:

1. 0.96 t/y Particulate Matter

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Permit GVA0003

METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

MAXIMUM EMISSION QUALITY:

1. 20% Opacity

WORKS AND PROCEDURES:

While the equipment is in use, good operating practices must be employed and it must be operated in accordance with an approved Fugitive Dust and Volatile Organic Compound Mitigation Action Plan.

The Daily Maximum Emission Quantity for Particulate Matter is 2.6 kg/day.

EMISSION SOURCE 06: Zig-Zag Air Separator and Cyclone discharging through a Vent(s).

MAXIMUM EMISSION FLOW RATE: **85 m³/min**

MAXIMUM ANNUAL OPERATING HOURS: **8760 h/y**

MAXIMUM EMISSION QUALITY:

1. 20 mg/m³ Particulate Matter
2. 10% Opacity

WORKS AND PROCEDURES:

Partial air flow from the Joest Zig-Zag Air Cylone Separator must be directed through a Filter Tube System and good operating practices must be employed. The equipment must be operated in accordance with an approved Fugitive Dust and Volatile Organic Compound Mitigation Action Plan.

EMISSION SOURCE 07: Shredded Material Storage Piles and Handling.

MAXIMUM EMISSION FLOW RATE: **The rate of discharge is that resulting from the transfer of shredded material and wind erosion effects.**

MAXIMUM ANNUAL OPERATING HOURS: **8760 h/y**

MAXIMUM EMISSION QUANTITY:

1. 0.73 t/y Particulate Matter

MAXIMUM EMISSION QUALITY:

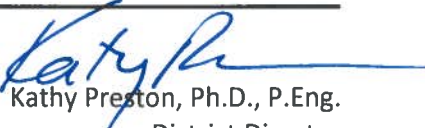
1. 20% Opacity

WORKS AND PROCEDURES:

While the equipment is in use, good operating practices must be employed. This source must be maintained in accordance with an approved Fugitive Dust and Volatile Organic Compound Mitigation Action Plan.

The Daily Maximum Emission Quantity for Particulate Matter is 4.8 kg/day.

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Permit GVA0003

SECTION 2 – GENERAL REQUIREMENTS AND CONDITIONS

A. POLLUTION NOT PERMITTED

Notwithstanding any conditions in this permit, no person may discharge or allow or cause the discharge of any air contaminant so as to cause pollution as defined in the Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008 and the Environmental Management Act.

B. AUTHORIZED WORKS, PROCEDURES AND SOURCES

Works and procedures, which this permit authorizes in order to control the discharge of air contaminants, must be employed during all operating periods of the related sources. The Permittee must regularly inspect and maintain all such works, procedures and sources.

The District Director must be provided with reasonable notice of any changes to or replacement of authorized works, procedures or sources. Any changes to or replacement of authorized works, procedures or sources must be approved by the District Director in advance of operation. For certainty, this does not include routine maintenance or repair.

The discharge criteria described in Section 1 of this permit are applicable on the issued or last amended date of this permit unless specified otherwise. If a date different to the issued or last amended date is specified, the existing works, procedures and sources must be maintained in good operating condition and operated in a manner to minimize emissions.

C. NOTIFICATION OF MONITORING NON-COMPLIANCE

The District Director must be notified immediately of:

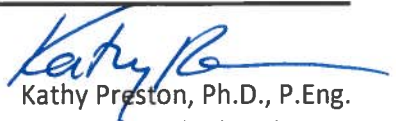
1. Any emission monitoring results, whether from a continuous emissions monitor or periodic testing, which exceed the quantity or quality authorized in Section 1 of this permit;
2. Any (a) interruption, (b) damage or (c) interference to any (i) continuous ambient air analyzer, (ii) meteorological sensor or (iii) related equipment required in Section 1 or Section 3 of this permit that would cause the continuous ambient air analyzer or meteorological sensor to be offline for a period greater than 48 hours; and
3. Any exceedance of a Metro Vancouver ambient air quality objective measured by an ambient monitoring station required in Section 1 or Section 3 of this permit.

Notification must be made to Metro Vancouver's 24-hour number: 604-436-6777, or to ERNotifications@metrovancover.org.

D. BYPASSES

The discharge of air contaminants that have bypassed authorized control works is prohibited unless advance approval has been obtained and confirmed in writing from the District Director.

Issued: November 30, 1992
Amended: December 20, 2023


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District Director

Permit GVA0003

METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

E. EMERGENCY PROCEDURES

In the event of an emergency or condition beyond the control of the Permittee that prevents effective operation of the authorized works or procedures or leads to unauthorized discharge, the Permittee must:

1. Comply with all applicable statutory requirements;
2. Immediately notify the District Director of the emergency or condition and of contingency actions invoked or planned to mitigate adverse impacts and restore compliance. Notification must be made to Metro Vancouver's 24-hour number: 604-436-6777 or ERnotifications@metrovancover.org; and
3. Take appropriate remedial action for the prevention or mitigation of pollution.

The District Director may specify contingency actions to be implemented to protect human health and the environment while authorized works are being restored and/or corrective actions are being taken to prevent unauthorized discharges.

If an emergency situation results in a "spill" as defined in the Environmental Management Act Spill Reporting Regulation, the spill must also be reported immediately to the Provincial Emergency Program by telephoning 1-800-663-3456.

F. AMENDMENTS

The terms and conditions of this permit may be amended, as authorized by applicable legislation. New works, procedures or sources or alterations to existing works, procedures or sources must receive authorization in advance of operation.

G. STANDARD CONDITIONS AND DEFINITIONS

Unless otherwise specified, the following applies to this permit:

1. Gaseous volumes are corrected to standard conditions of 20 degrees Celsius (°C) and 101.325 kilo Pascals (kPa) with zero percent moisture.
2. Contaminant concentrations from the combustion of specific fuel types are corrected to the following Oxygen content, unless specified otherwise:
 - 3% O₂ for natural gas and fuel oil; or
 - 8% O₂ for wood fuel
3. Where compliance testing is required, each contaminant concentration limit in this permit will be assessed for compliance based on a valid test using test methods approved by the District Director.
4. Visual opacity measurements are made at the point of maximum density, nearest the discharge point and exclude the effect of condensed, uncombined water droplets. Compliance determinations are based on a six-minute average in accordance with the United States Environmental Protection Agency (US EPA) Method 9: Visual Determination of the Opacity of Emissions from Stationary Sources. Continuous Emission Monitor System (CEMS) opacity compliance determinations are based on a one-hour average (taken from the top of each hour).
5. If authorized in Section 1 of this permit, standby fuel use is restricted to a maximum of 350 hours per year and to those periods during which the primary authorized fuel is not available. Fuel oil sulphur

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Permit GVA0003

METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

content must not exceed 15 milligrams per kilogram (mg/kg) and emissions during fuel oil firing must not exceed 10% opacity.

6. Definitions in the Environmental Management Act and Air Quality Management Bylaw apply to terminology used in this permit.
7. Threshold Limit Values (TLV) refer to the Time Weighted Average (TWA) exposure limits for substances specified in the American Conference of Governmental Industrial Hygienists Threshold Limit Values handbook, current on the latest date that this permit issuance or amendment came into effect.
8. Sulphur Oxides (SO_x) are expressed as Sulphur Dioxide.
9. Nitrogen Oxides (NO_x) are expressed as Nitrogen Dioxide.
10. The Canadian Council of Ministers of the Environment (CCME) "Environmental Guidelines for Controlling Emissions of Volatile Organic Compounds from Aboveground Storage Tanks (PN1180)" must be adhered to for all applicable tanks unless otherwise stated in this permit.
11. Authorized 'Maximum Annual Operating Hours' of 8760 hours per year for an emission source is equivalent to authorization for continuous operation of the emission source for an entire calendar year, including leap years.

H. RECORDS RETENTION

All records and supporting documentation relating to this permit must be kept for at least three years after the date of preparation or receipt thereof, and be made available for inspection within 48 hours of a request by an Officer.

I. HEATING, VENTILATION, AIR CONDITIONING AND INTERNAL COMBUSTION ENGINES

Any natural gas-fired heating, ventilation or air conditioning system for buildings and any internal combustion engine located at the discharge site must be maintained and operated in a manner prescribed by the manufacturer to ensure good combustion of the fuel with minimum discharge of air contaminants.

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Permit GVA0003

METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

SECTION 3 – REPORTING REQUIREMENTS

A. MONITORING REQUIREMENTS AND REPORTING

Unless otherwise approved in writing by the District Director prior to any sampling or analysis, all measurements must be performed by an independent agency in accordance with Metro Vancouver Air Emissions Sampling Program Manual of Methods and Standard Operating Procedures and the BC Ministry of Environment Field Sampling Manual, as they may be amended from time to time. Any variance from these procedures must receive prior written approval from the District Director.


A minimum of 5 working days advance notice must be given prior to taking measurements required by this Monitoring and Sampling Program. Notification must be given to the Metro Vancouver Environmental Regulation & Enforcement Division (phone 604-436-6777, Fax 604-436-6707, email EREnotifications@metrovanancouver.org).

Unless otherwise specified, sampling must be performed under operating conditions representative of or greater than the previous 90 calendar days of operation. All field data and calculations must be submitted with monitoring results and they must be reported in the metric units that are used in this permit. These submissions must include process data relevant to the operation of the source of the emissions and the performance of the emission control works.

Unless otherwise specified or approved in writing by the District Director, stack sampling must not occur more than 120 calendar days prior to the due dates specified below.

The Permittee must conduct the following monitoring and sampling and submit electronic reports of the results to the District Director by the due dates specified in the following table using a password enabled web based application provided by Metro Vancouver.

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	PARAMETER(S)	TEST METHOD	REPORT TYPE/TITLE
N/A	N/A	N/A		N/A	N/A	N/A


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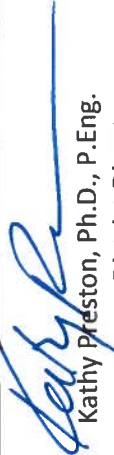
Permit GVA0003

METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

B. INFORMATION REPORTING REQUIREMENTS

The Permittee must submit electronic reports containing the required information to the District Director by the due dates specified in the following table using a password enabled web based application provided by Metro Vancouver.

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/TITLE
Facility	March 31, 2024	On or before March 31 for each subsequent year.	Written report detailing the types and amounts of principal products produced and principal raw materials used in the preceding calendar year	Materials and Products
01, Facility	March 31, 2024	On or before March 31 for each subsequent year.	Written report providing details of the total number of hours and days operated in the preceding calendar year. Detailed records are to be maintained in a format approved by the District Director.	Operating Period
01	March 31, 2024	On or before March 31 for each subsequent year.	Written report indicating inspection frequency and action taken, or proposed, to solve any problems detected for the water injection system in the previous calendar year.	Cooling-Water and Foaming Agent Injection System Information - Other
03, 01, 05, 07	April 30, 2024	Quarterly, on or before April 30, July 31, October 31 and January 31 of each year.	Submit a written report for the preceding calendar quarter that summarizes 1) the daily throughput and the daily recovery rates (in tonnes per day), 2) the materials loaded, and 3) an estimate of daily emissions, using the calculation below. Detailed records are to be maintained in a format approved in writing by the District Director and made available for inspection by Metro Vancouver staff.	Daily Throughput and Emission Rates Report Information - Other


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Permit GVA0003

METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/TITLE
			<p>Emission Source 01 - based on ISRI Title V Applicability Workbook. Emission Rate for Particulate Matter, where Emission Factor (EF) = 0.0048 kg/tonne. Daily throughput t/d x 0.0048 kg PM/t throughput = Daily Emission kg/d.</p> <p>Emission Source 03 - based on EPA AP-42, S11.19.2, Table 11.19.2-1. Emission Rate for Particulate Matter, where % Control Efficiency (CE) = 70: Daily throughput t/d x 0.00007 kg PM/t throughput x (1-%CE/100) x 9 conveyor transfer points = Daily Emission kg/d.</p> <p>Emission Source 05 - based on ISRI Title V Applicability Workbook Emission Rate for Particulate Matter Daily emissions kg/d = daily operating hours (h/d) x 0.0273 kg PM/h x 4 points = Daily Emission kg/d.</p> <p>Emission Source 07 - based on EPA AP-42, S13.2.4, Emission Rate for Particulate Matter, where Emission Factor (EF) = 0.0006 kg/tonne. Daily throughput t/d x 0.0006 kg PM/t throughput x 2 points = Daily Emission kg/d.</p>	
01, 03, 04, 05, 06, 07, Facility	June 30, 2024	On or before June 30 for each subsequent year.	<p>The permit holder must submit a Fugitive Dust and Volatile Organic Compound Mitigation Plan for review, comment, and written approval by the District Director. The Plan must identify all potential facility sources of fugitive dust and volatile organic compounds (VOCs). The Plan must include measures and proposed actions to control and mitigate fugitive dust emissions and VOC</p>	Fugitive Dust and Volatile Organic Compound Mitigation Plan

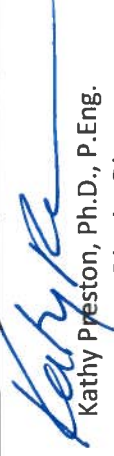

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Permit GVA0003

METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/TITLE
			<p>emissions (from material handling equipment and operations, non-point sources, and area sources).</p> <p>Yearly updates to the Plan must be submitted and include an annual review of the measures and actions employed in the previous calendar year. The annual review must also include a summary of the number, nature, and management of any fugitive dust and/or VOC complaints received by the Permittee in the past year, changes in procedures and/or equipment, and recommendations for on-going improvement.</p>	
01, 03, 04, 05, 06, 07	November 30, 2030	N/A	<p>The permittee must submit a written Technology Assessment Plan to the District Director, for review, comment, and written approval.</p> <p>The scope of the plan must include, but is not be limited to:</p> <p>a) An evaluation of control technologies (including modifications and optimization to existing control technologies, works, and procedures) that will allow them to meet best available control technology standards and substantially reduce both particulate matter emissions (Total PM, PM₁₀, and PM_{2.5}) and VOC emissions from permitted sources.</p> <p>b) Information on the feasibility of implementation, including approximate costs and schedule.</p> <p>The methodology that will be used to research, assess, and rank technologies must be clearly described.</p>	<p>Technology Assessment Plan</p> <p>Information - Other</p>


 Kathy Preston, Ph.D., P.Eng.
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Permit GVA0003

METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT

EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/TITLE
01, 03, 04, 05, 06, 07	November 30, 2031	On or before November 30 for each subsequent year.	<p>This report must be prepared by a Qualified Professional* and must include information on the feasibility, costs and effectiveness of methods and control systems for reduction of PM and VOC emissions. The use of combined technologies for optimal air contaminant removal efficiency must also be explored as a means for continuous improvement.</p> <p>*As submitted by the permit holder using the most recent versions of the "Qualified Professional Declaration of Competency" and "Qualified Professional Conflict of Interest Disclosure Statement" forms, as available on the Metro Vancouver website.</p> <p>The permittee must submit a written Technology Assessment Report to the District Director for review, comment and written approval. The report must be prepared in accordance with the approved Technology Assessment Plan and include, but not be limited to:</p> <ul style="list-style-type: none"> a) Proposed preferred emission control technology options, b) Refined capital and operating costs, c) Proposed emission limits based on implementing the preferred technology, d) Refined implementation schedule. <p>This report must be prepared by a Qualified Professional* and must include information on the feasibility, costs and effectiveness of methods and control systems for reduction of PM and NOx emissions. The use of combined</p>	Technology Assessment Report Information - Other


 Kathy Preston, Ph.D., P.Eng.
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 Amended: December 20, 2023

Permit GVA0003

METRO VANCOUVER REGIONAL DISTRICT AIR QUALITY MANAGEMENT PERMIT


EMISSION SOURCE	INITIAL DUE DATE	SUBSEQUENT DUE DATES	REQUIREMENT	REPORT TYPE/TITLE
			<p>technologies for optimal air contaminant removal efficiency must also be explored as a means for continuous improvement.</p> <p>*As submitted by the permit holder using the most recent versions of the "Qualified Professional Declaration of Competency" and "Qualified Professional Conflict of Interest Disclosure Statement" forms, as available on the Metro Vancouver website.</p>	

C. AMENDED OR ADDITIONAL REQUIREMENTS

Based on the results of the monitoring program, including the stack sampling results or any other information, the District Director may:

1. Amend the monitoring and reporting requirement of any of the information required by this Permit including plans, programs and studies.
2. Require additional investigations, tests, surveys or studies.

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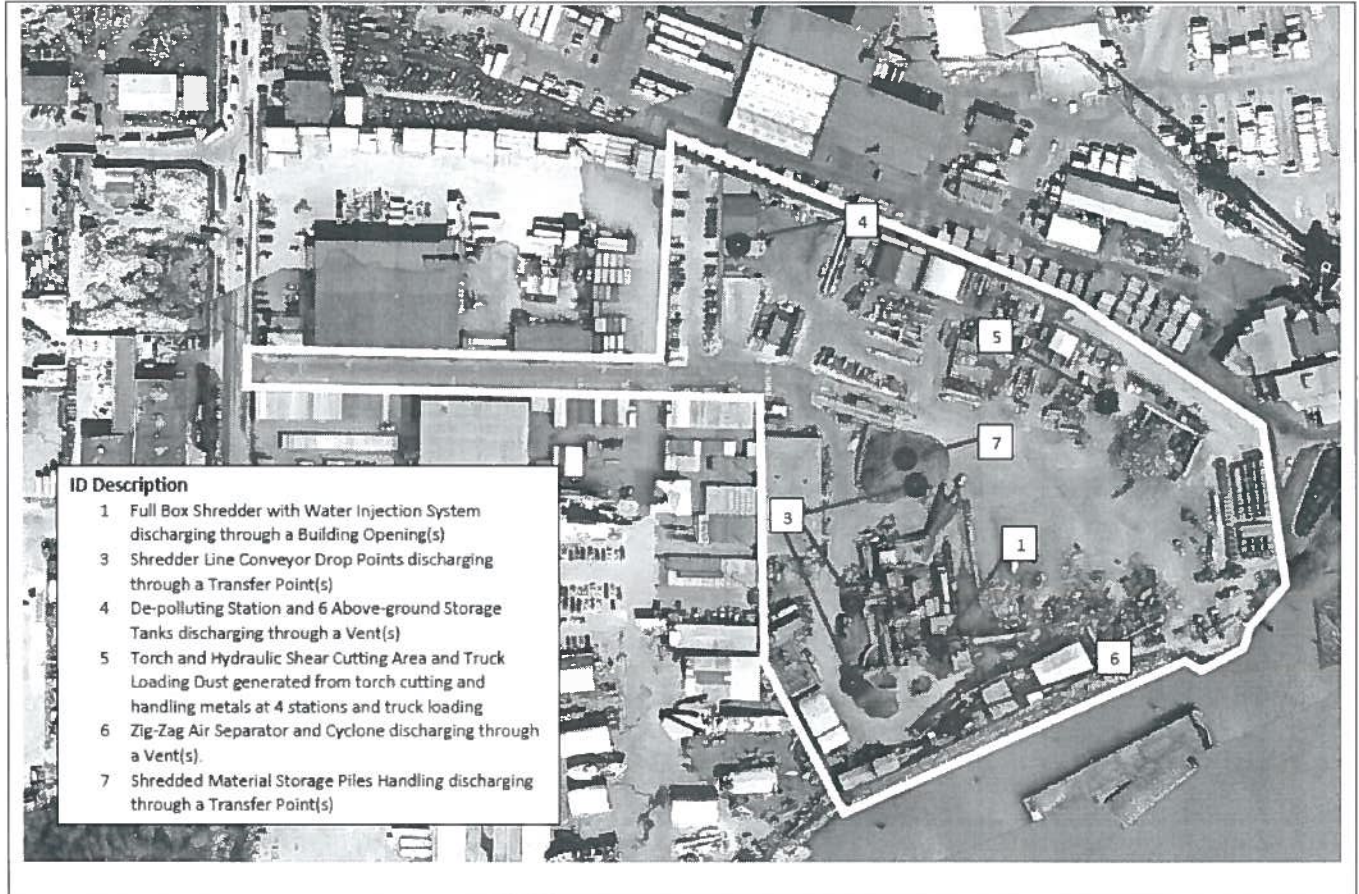

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Permit GVA0003

SECTION 4 – SITE PLAN

LEGAL DESCRIPTION OF DISCHARGE SITE: Parcel Identifier: 003-456-811, Lot 8 Except part plan 49844, District Lot 459, Group 1, New Westminster District Plan 47113

The following site plan is not to scale and the locations of the discharge points are approximate.



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Permit GVA0003